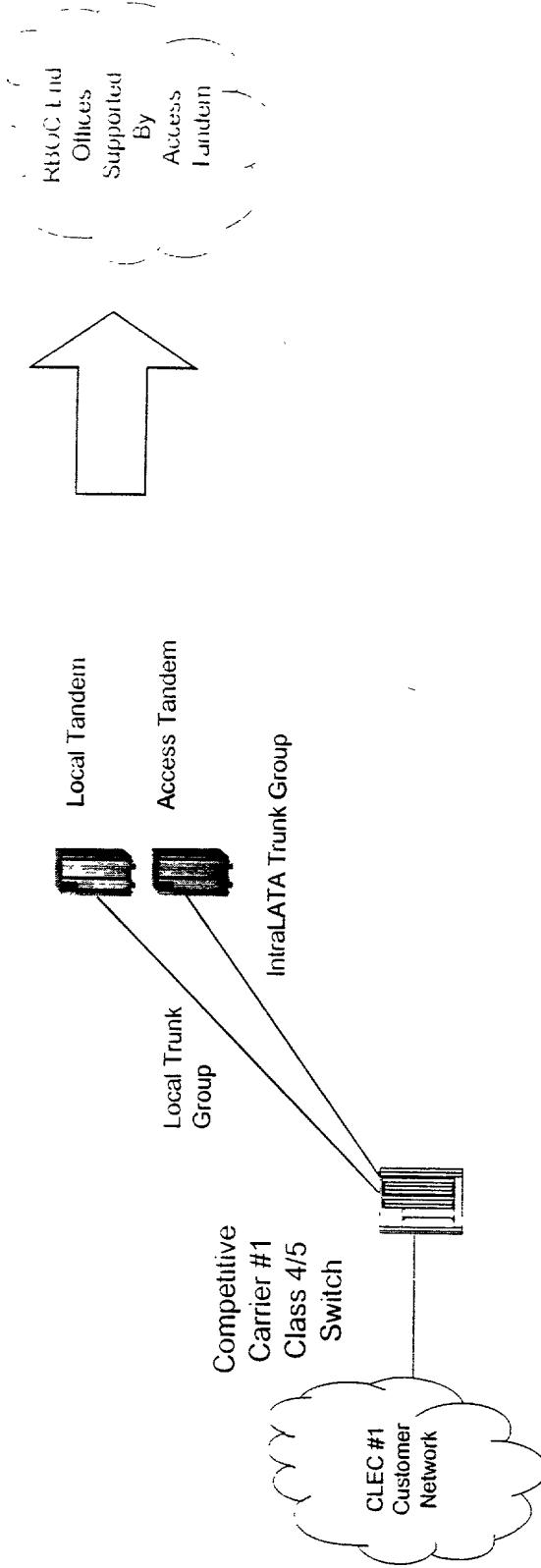


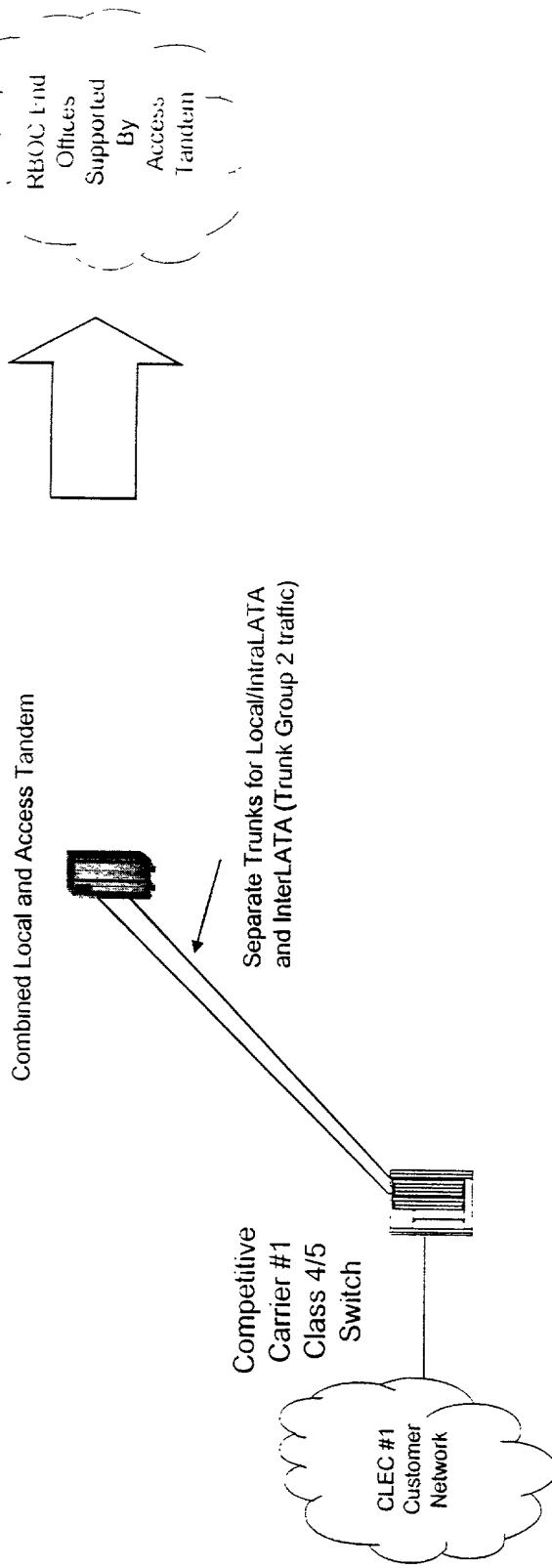
Prior Art

FIGURE 1A



Prior Art

FIGURE 1B



Ameritech LATA 357 Tandem Trunk Group 1 Requirements

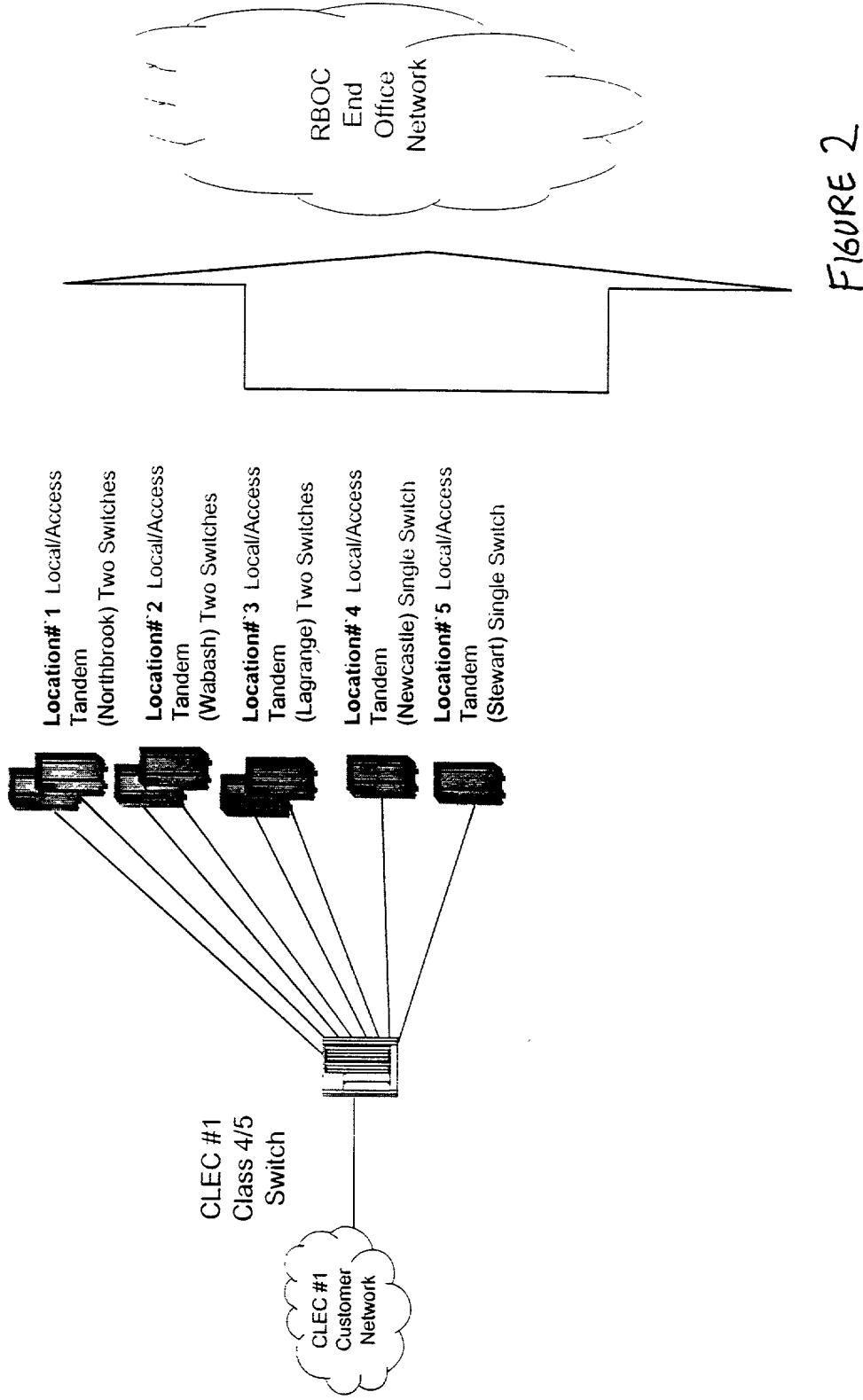
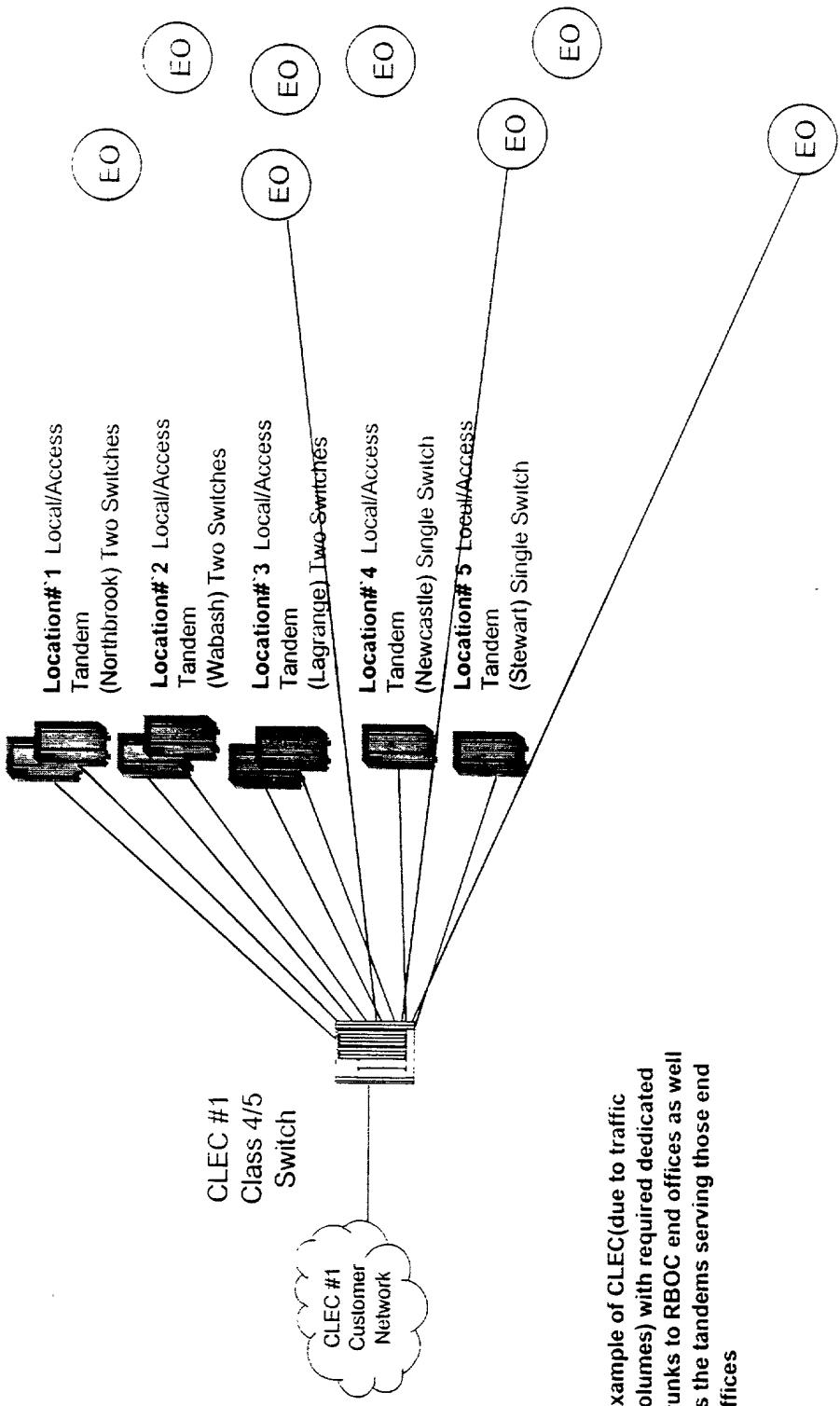


FIGURE 2

Prior Art

Ameritech LATA 357 Tandem Trunk Group 1 Requirements

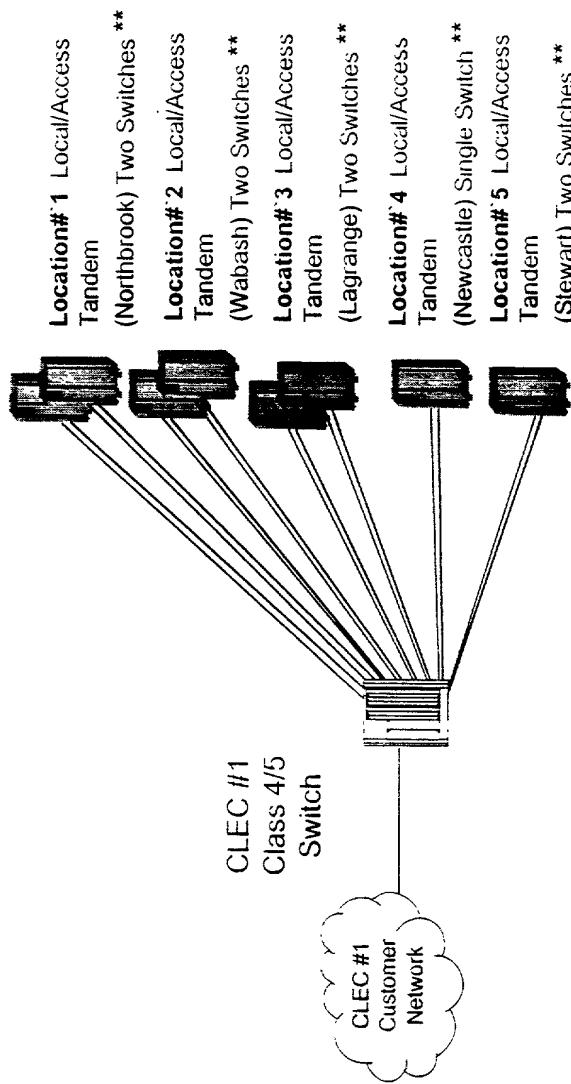


Example of CLEC(due to traffic volumes) with required dedicated trunks to RBOC end offices as well as the tandems serving those end offices

FIGURE 3

Prior Art

Ameritech LATA 357 Tandem Trunk Group 2 Requirements

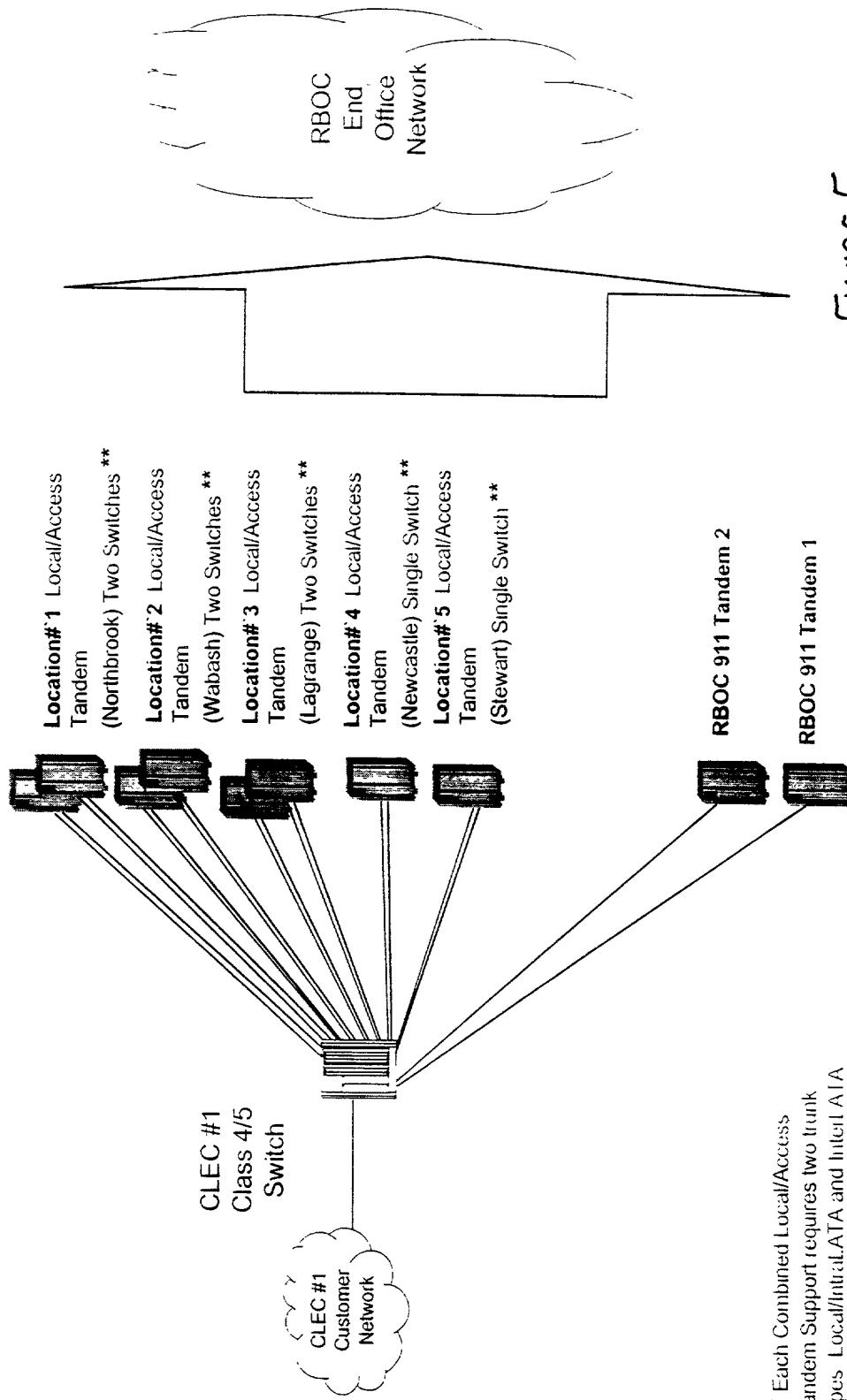


** Each Combined Local/Access
Tandem requires two trunk types
Local/IntraLATA and InterLATA

FIGURE 4

Prior Act

Ameritech LATA 357 Tandem Trunk Group 3 Requirements



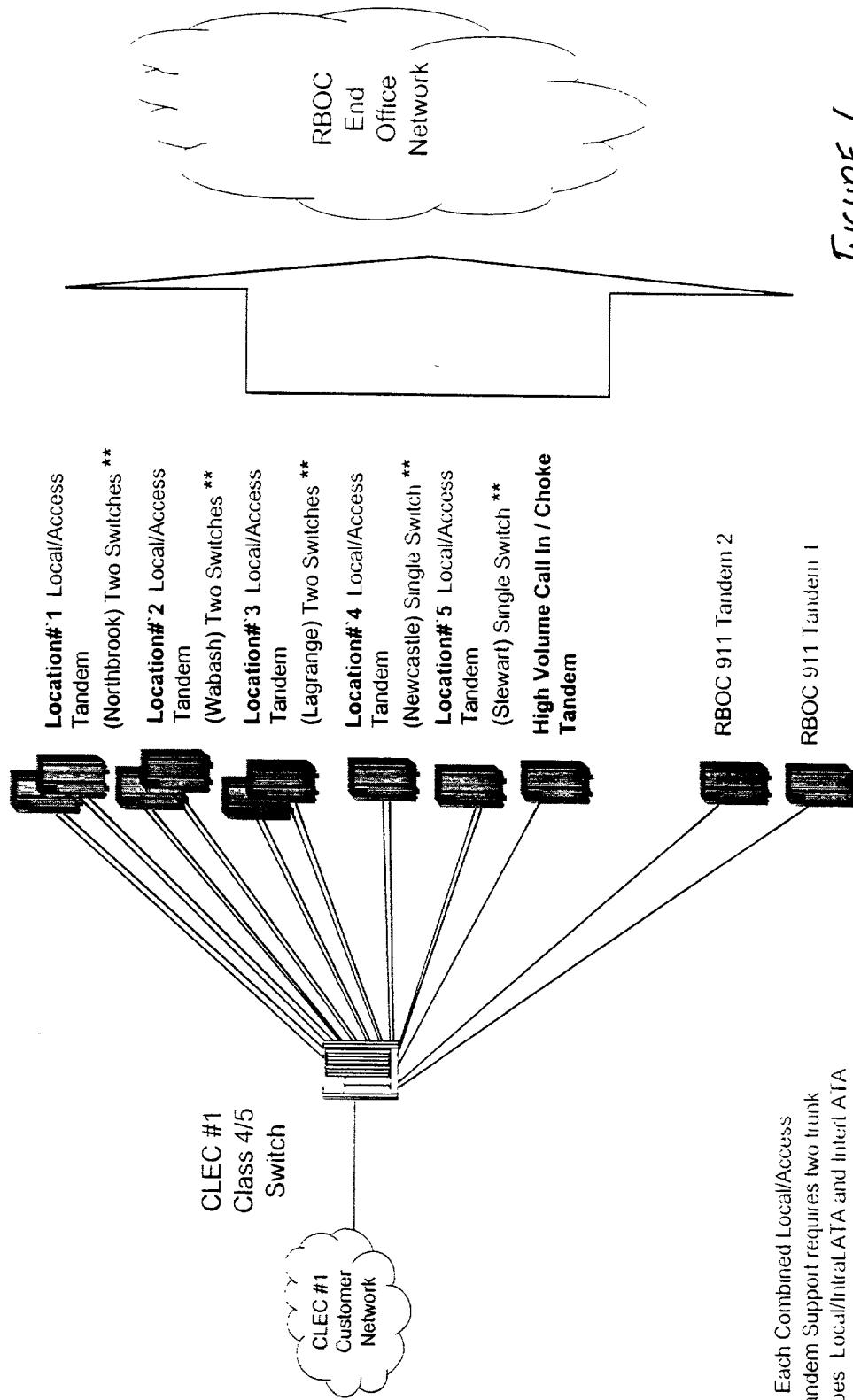
** Each Combined Local/Access
Tandem Support requires two trunk
types Local/Intra.LATA and Inter LATA

RBOC 911 Tandem 2
RBOC 911 Tandem 1

FIGURE 5

Prior Art

Ameritech LATA 357 Tandem Trunk Group 4 Requirements

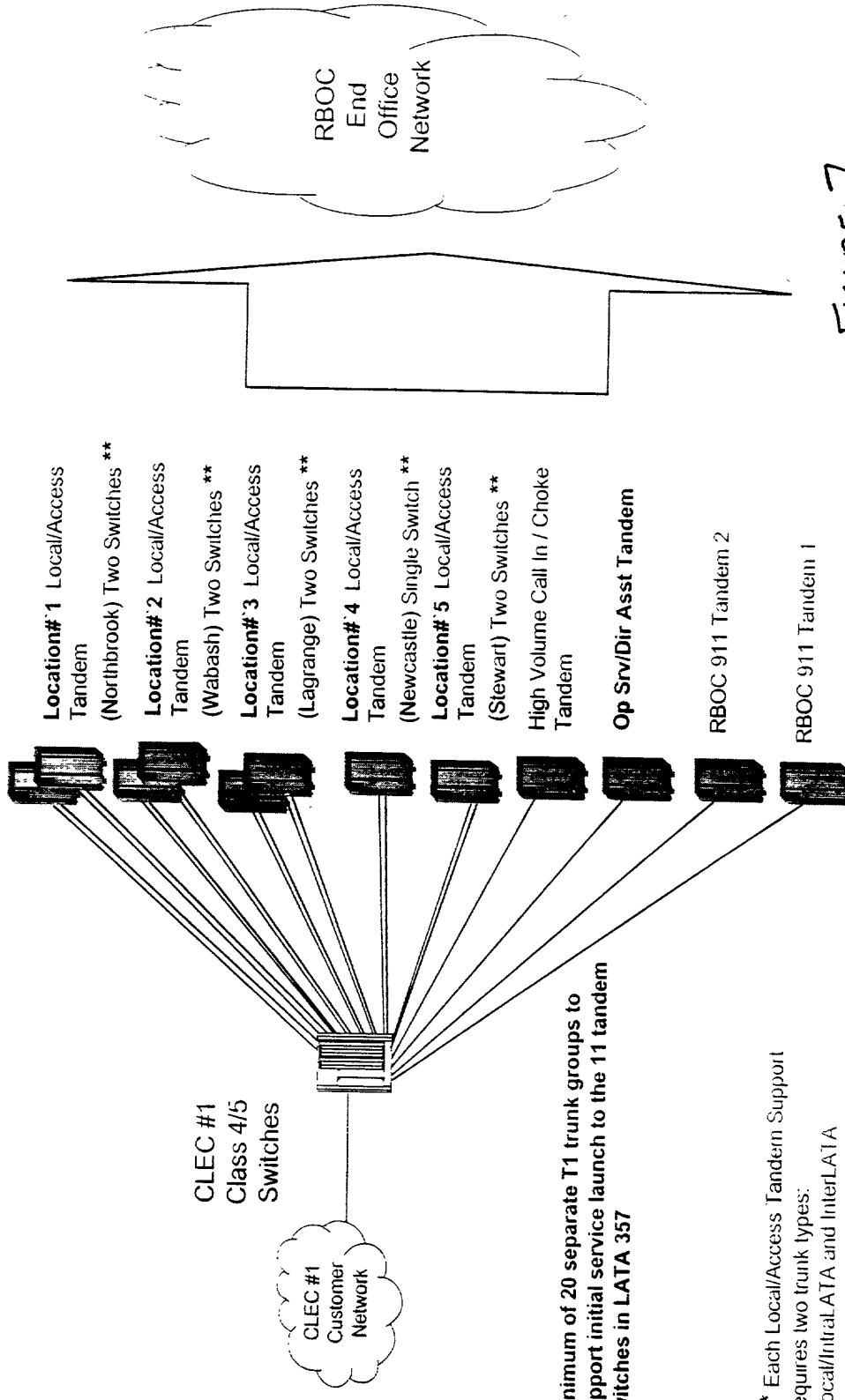


** Each Combined Local/Access Tandem Support requires two trunk types Local/InfralATA and Infrl ATA

FIGURE 6

Prior Art

Ameritech LATA 357 Tandem Trunk Group 5 Requirements



** Each Local/Access Tandem Support requires two trunk types:
Local/IntraLATA and InterLATA

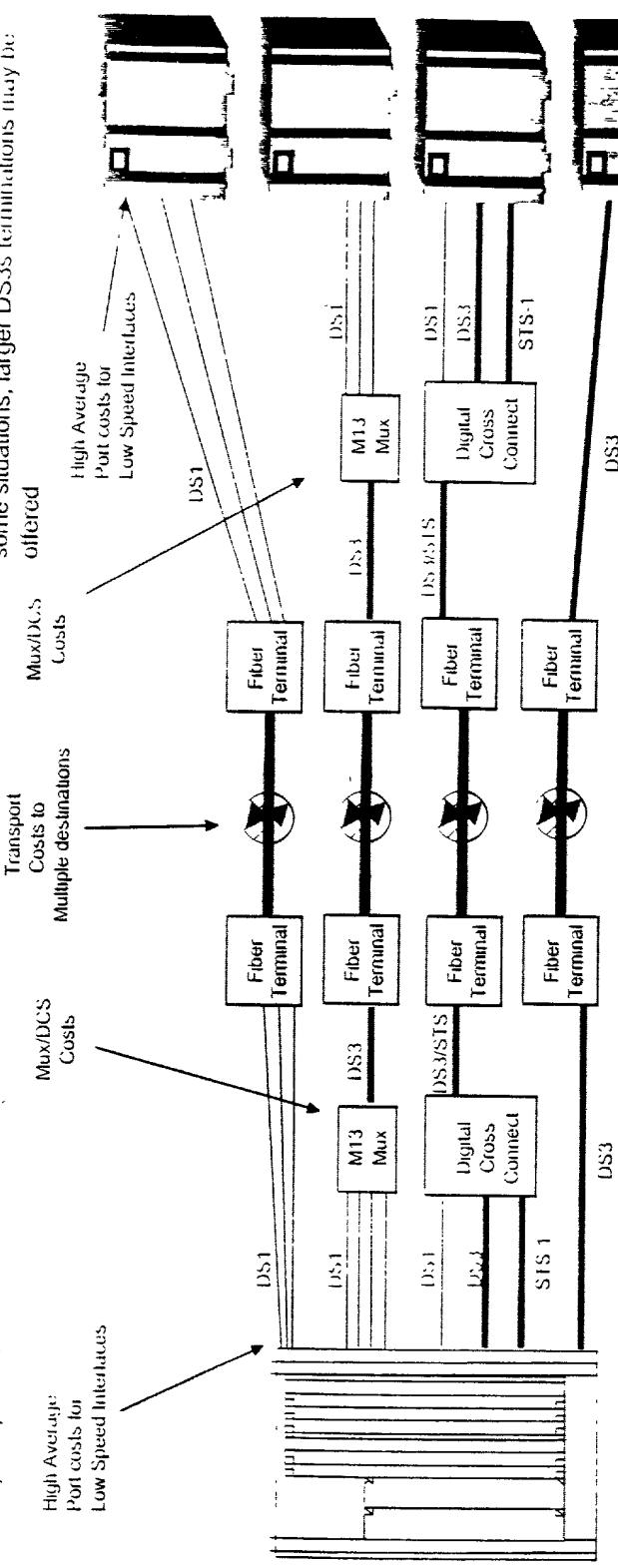
RBOC 911 Tandem 2

RBOC 911 Tandem 1

Figure 7

Prior Art

Port Costs [Transporting to various tandem switches requires Trunk groups to be managed by Port Costs DS1, DS3, STS 1]



Cost Elements:

- Port Costs DS1s are used for both the Carrier and the RBOC Tandem when call volume to the Tandem does not justify a DS3 and will not grow past a couple of 11s (e.g. E911, OP/LA, Choke)
- DS3s are the primary interface used for the Carrier when high volume Tandem traffic (Local, Intert. LA, Intert. AA) is planned. However, M13 muxes or DCS systems are necessary at the RBOC Tandem CO to allow for managed growth of the tandem switch ports to reduce the DS3s to 11.
- Trunk groups are transported via owned, RBOC leased or third party leased fiber facilities
- Complexity of planning requires additional *flexibility*, low rate of transport, multiple transport elements, network monitoring/provisioning

FIGURE 8

Prior Art

Ameritech LATA 357 Tandem Trunking Requirements

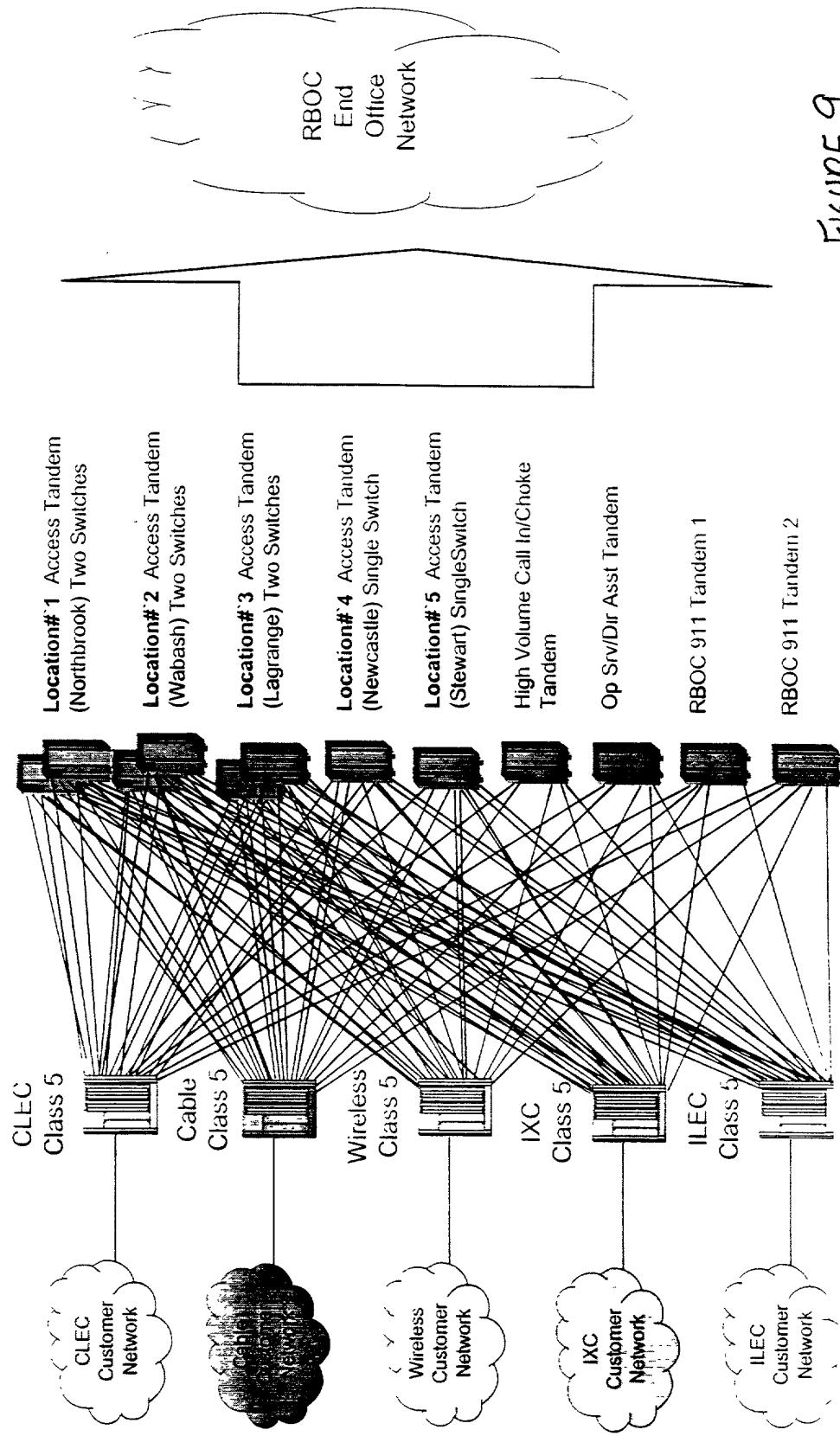


FIGURE 9

Prior Art

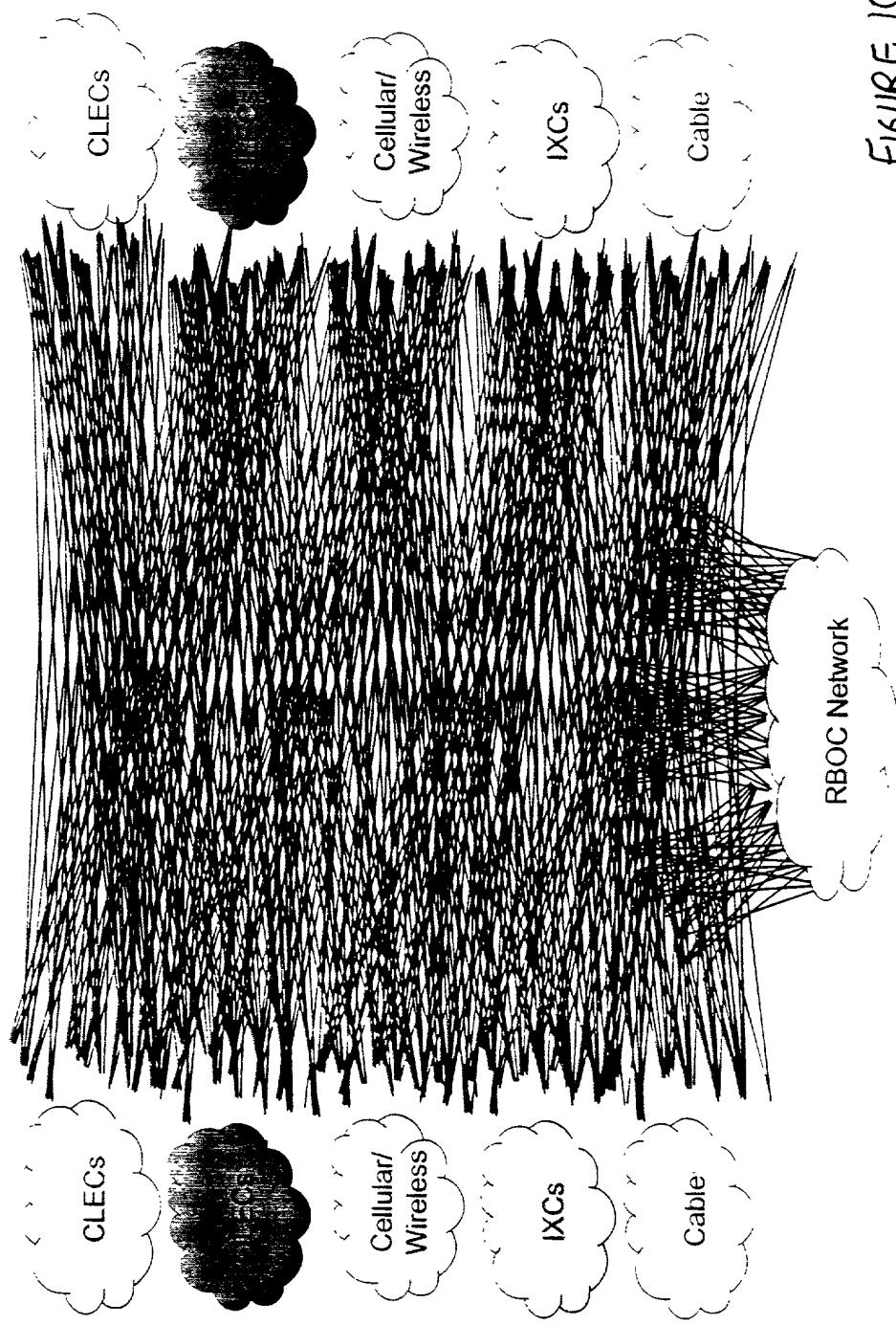


FIGURE 10

Prior Art

Ameritech LATA 357 Tandem Trunking Requirements

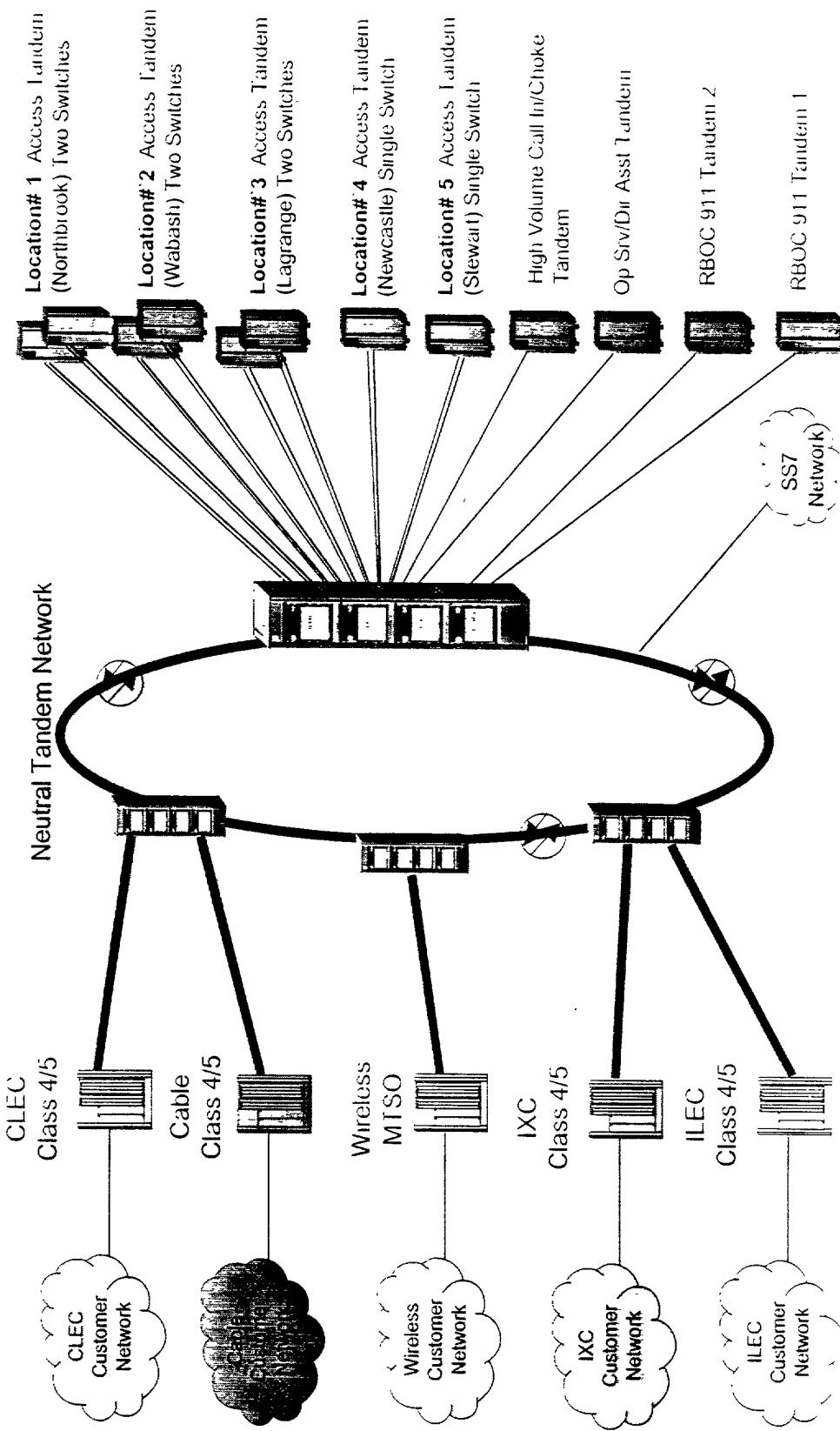
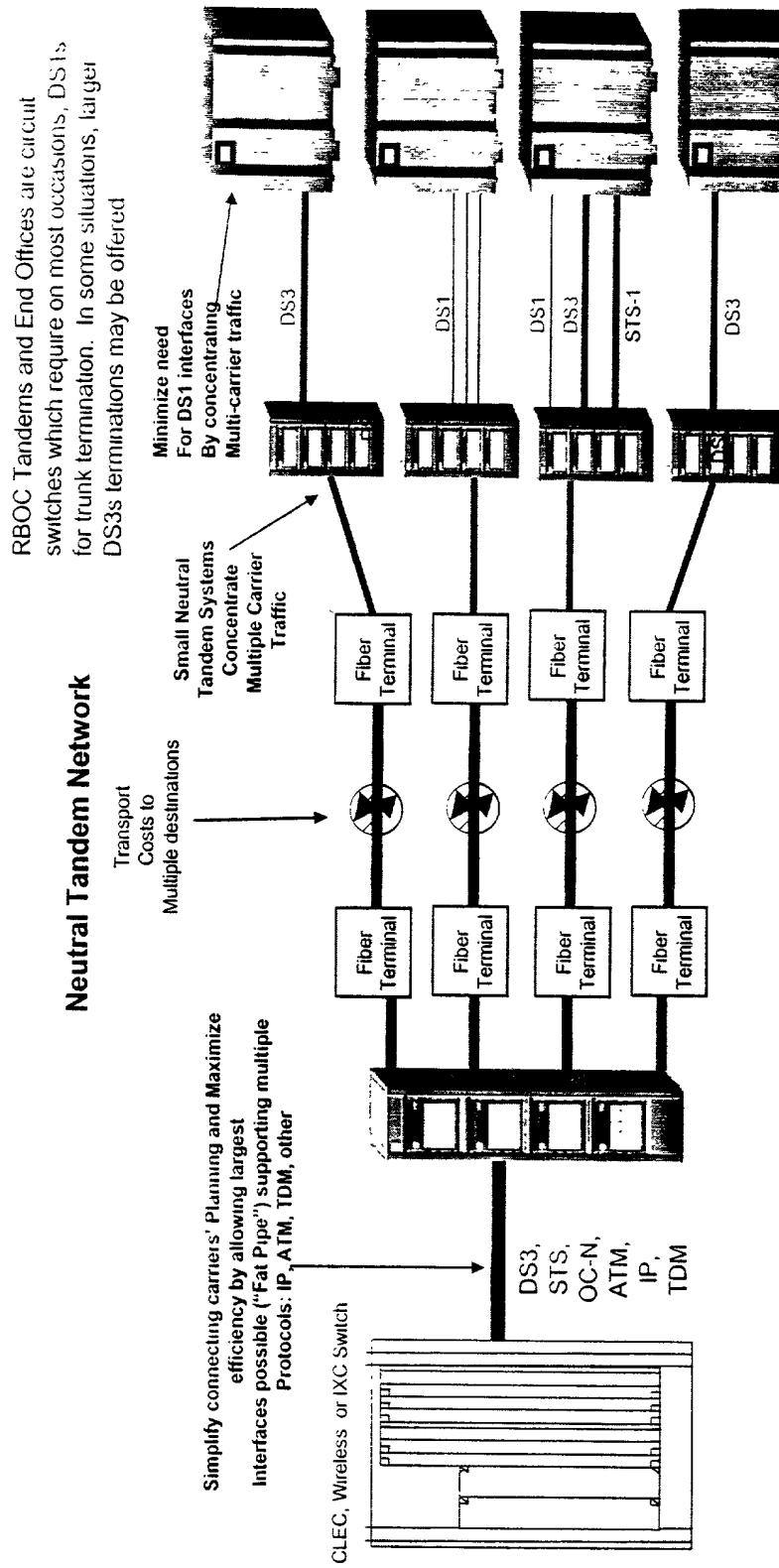


Figure 11

FIGURE 12



Cost Elements:

- NTN reduces connecting carriers' tandem transport to a single "Fat Pipe" to the Neutral Tandem Network. Neutral tandem will be located in convenient Carrier Hotels, Data Centers and Central Offices to minimize the need for Carriers to be burdened by high transport costs. Protocols allow for the evolution of the Class 5 switch to the softswitch architecture of the future without the need to incorporate high cost TDM interfaces. NTN routes and terminates traffic at either the serving RBOC tandem or at the RBOC end offices depending on traffic type and efficiency

Ameritech LATA 357 Tandem Trunking Requirements

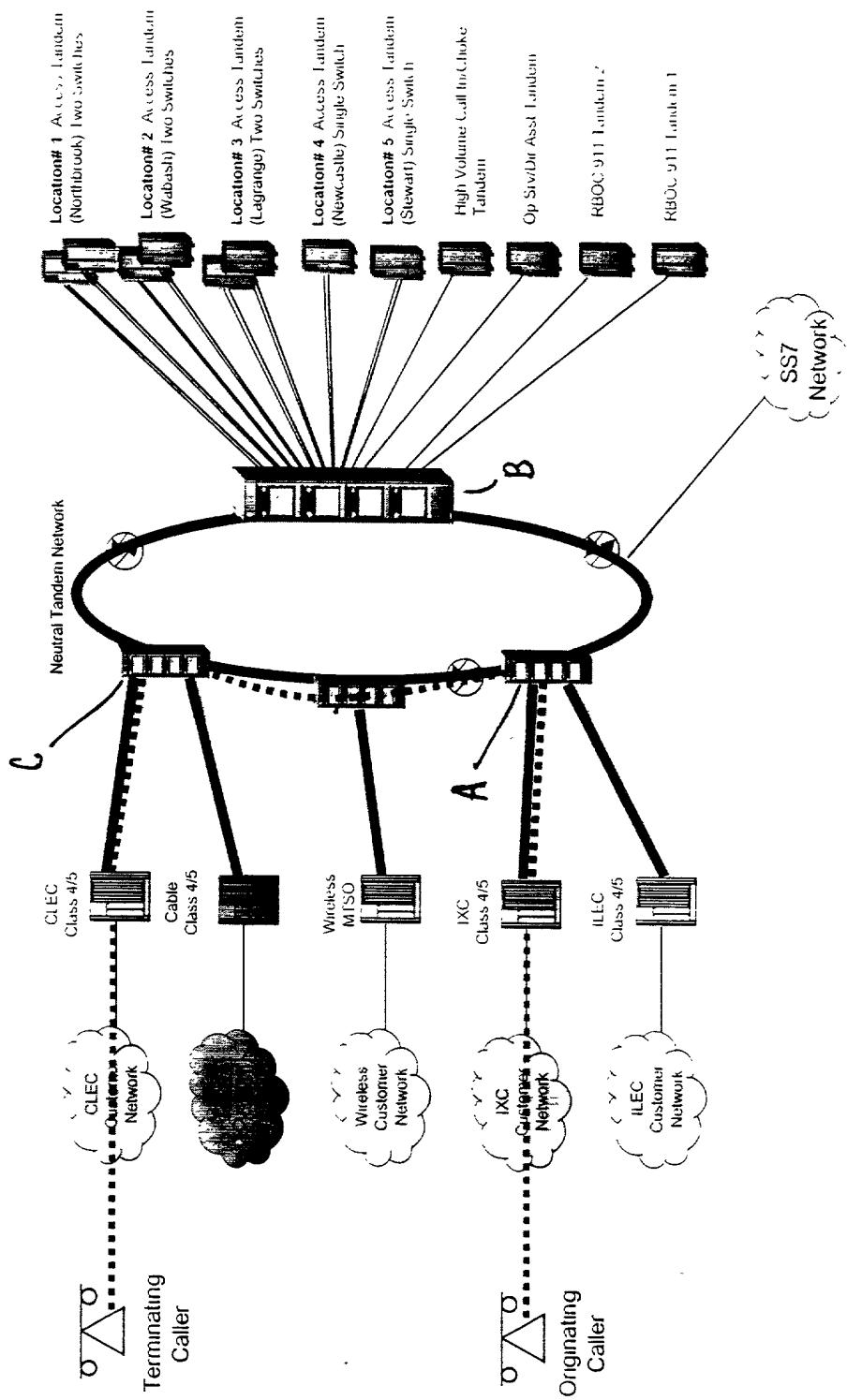


FIGURE 13

Ameritech LATA 357 Tandem Trunking Requirements

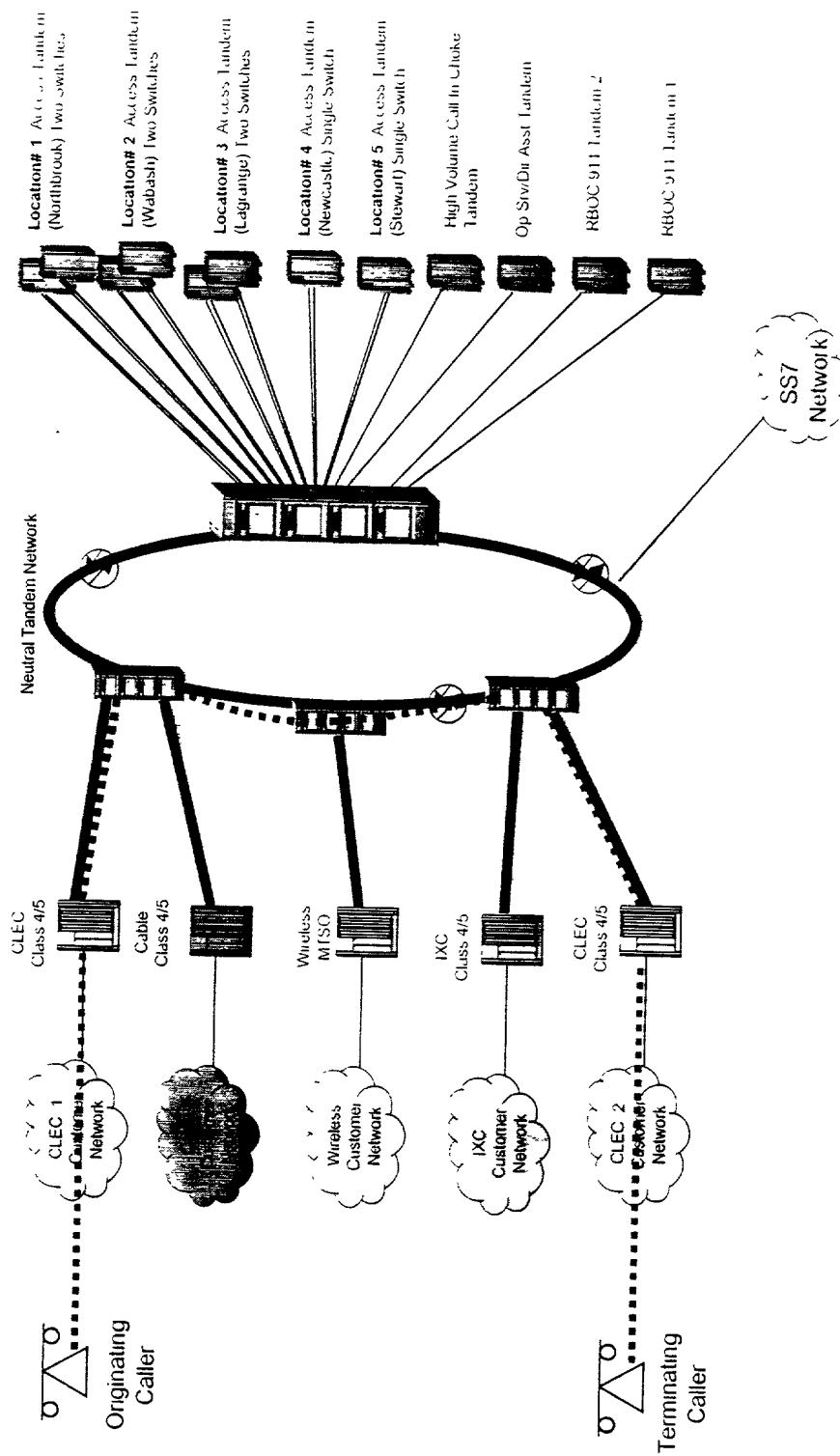


FIGURE 14

Ameritech LATA 357 Tandem Trunking Requirements

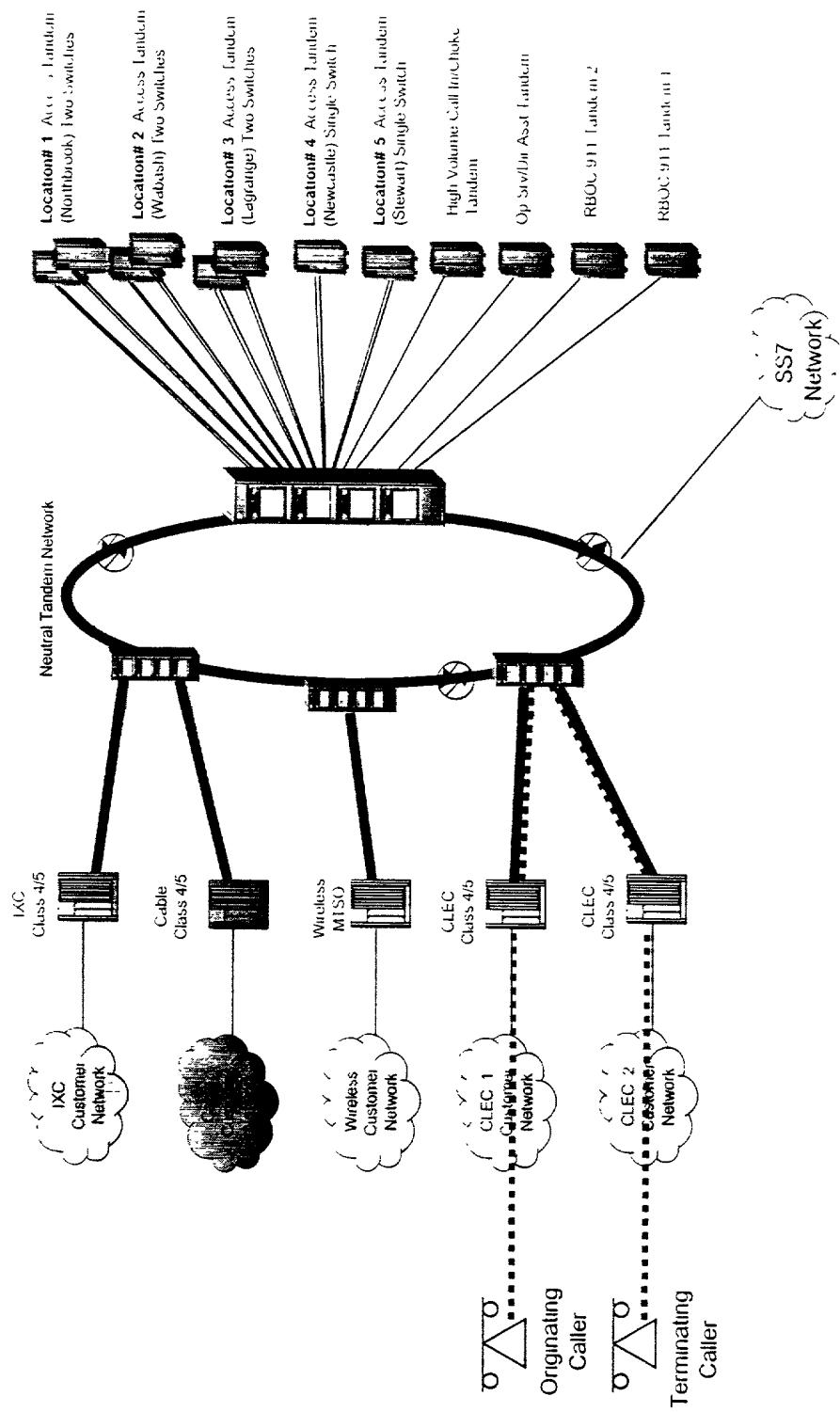


FIGURE 15

Ameritech LATA 357 Tandem Trunking Requirements

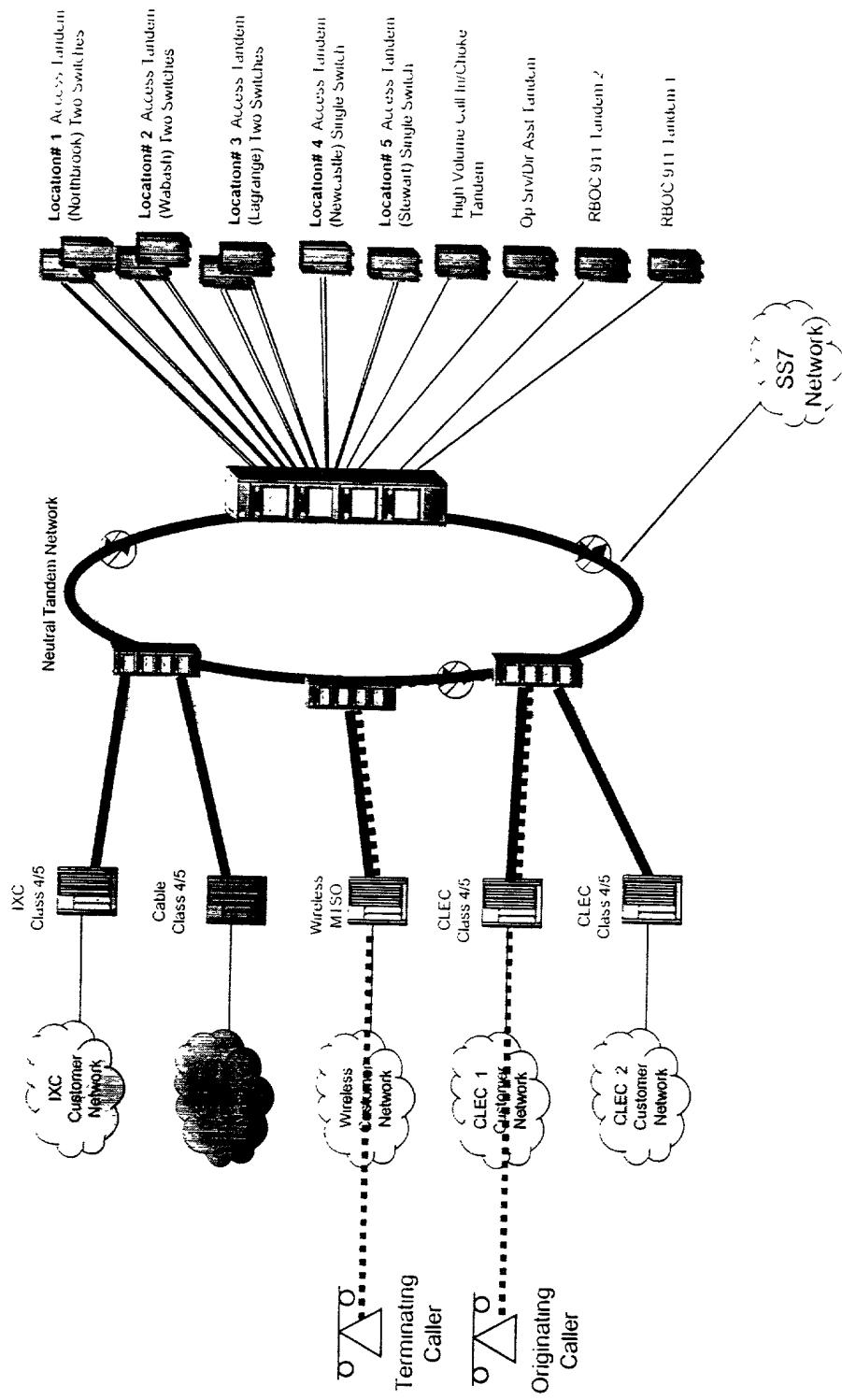


FIGURE 16

Ameritech LATA 357 Tandem Trunking Requirements

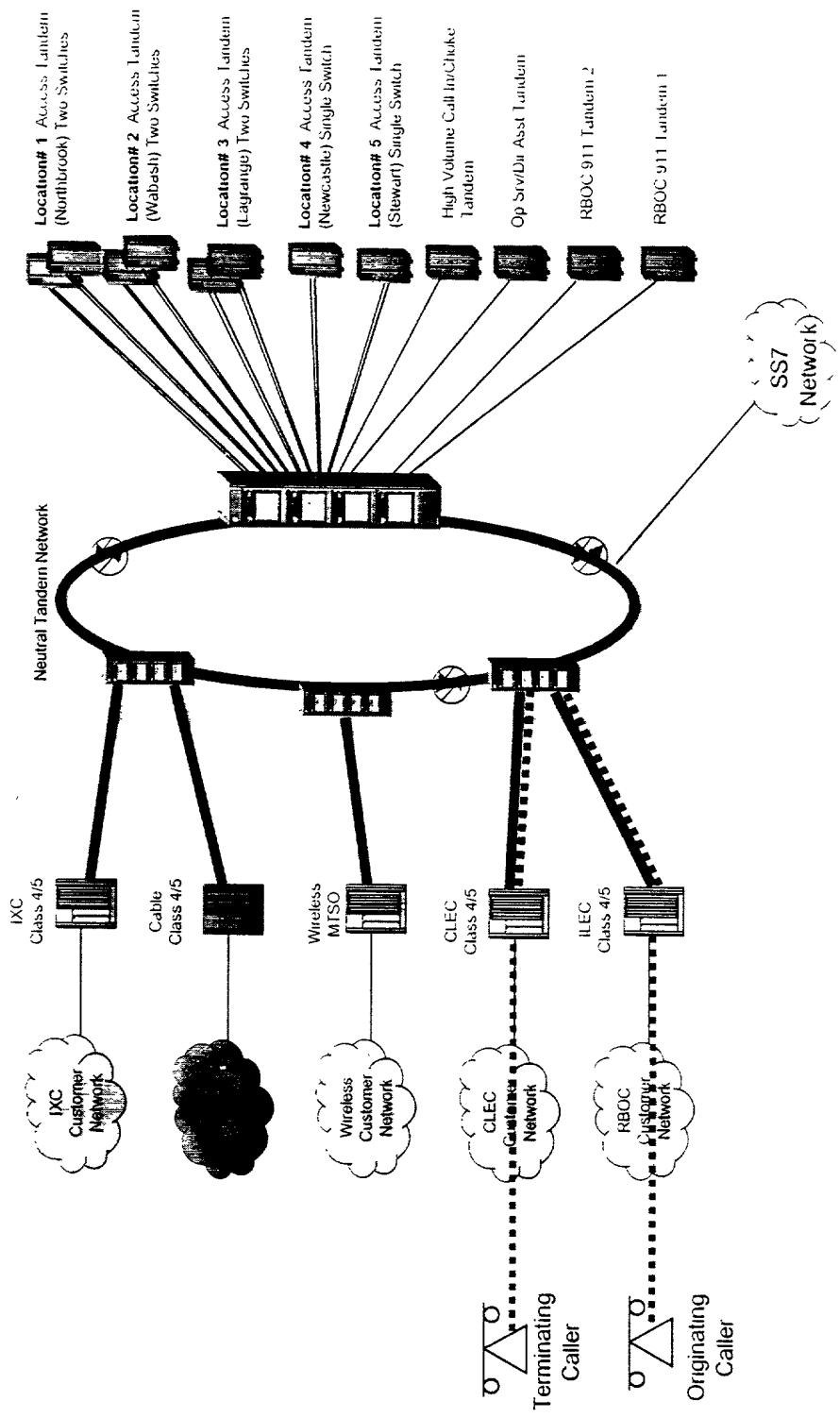
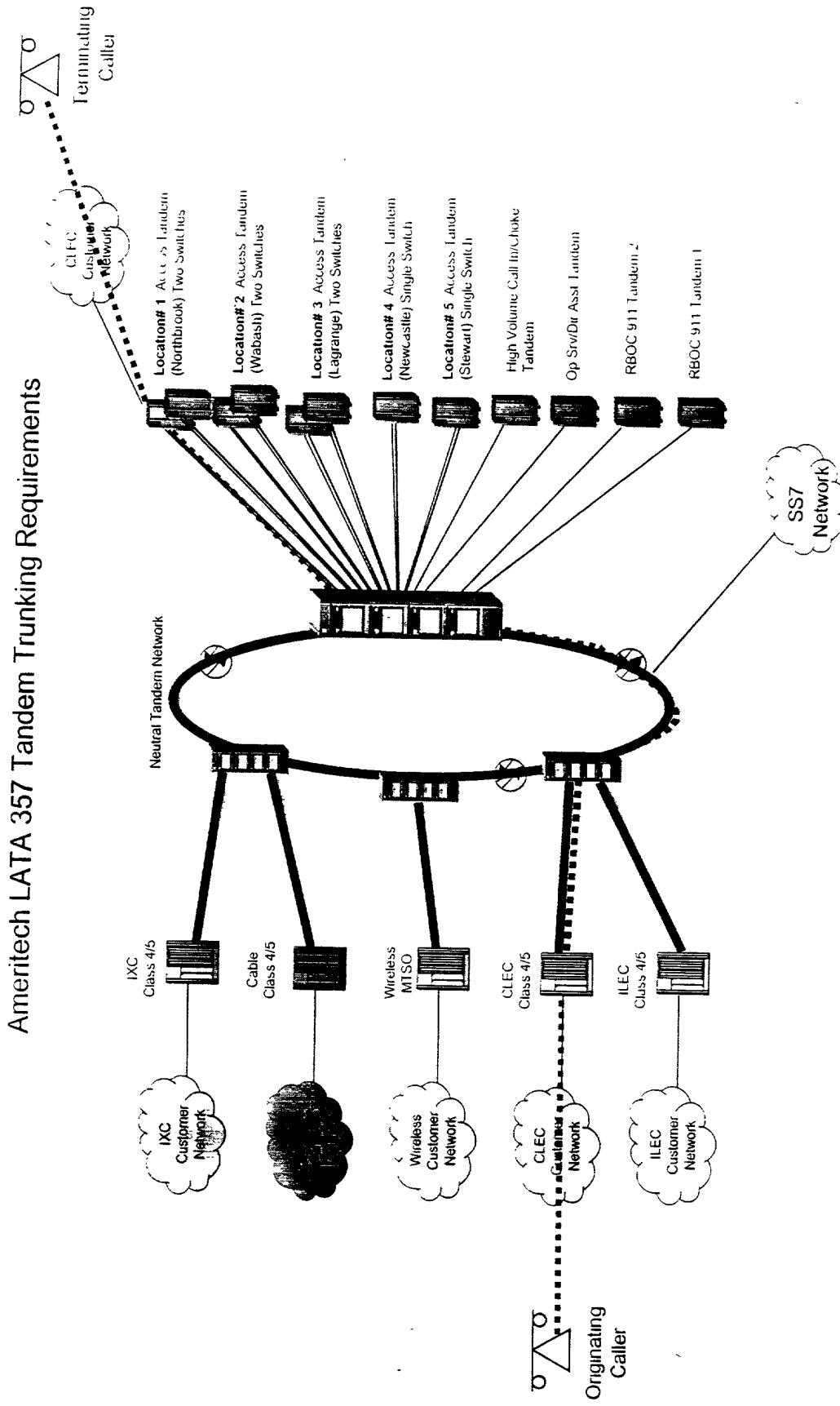


Figure 17

FIGURE 18



Ameritech LATA 357 Tandem Trunking Requirements

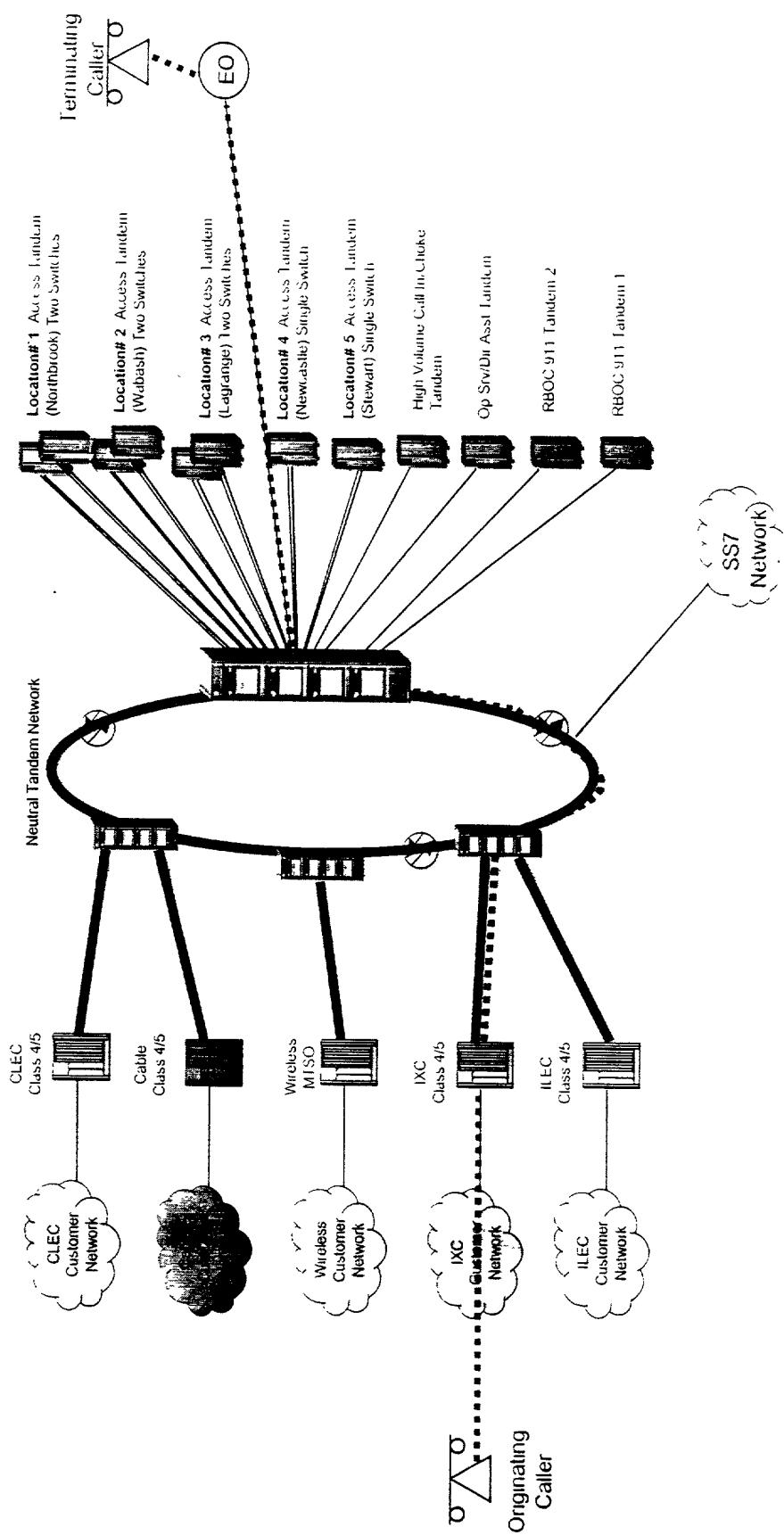


FIGURE 19

Ameritech LATA 357 Tandem Trunking Requirements

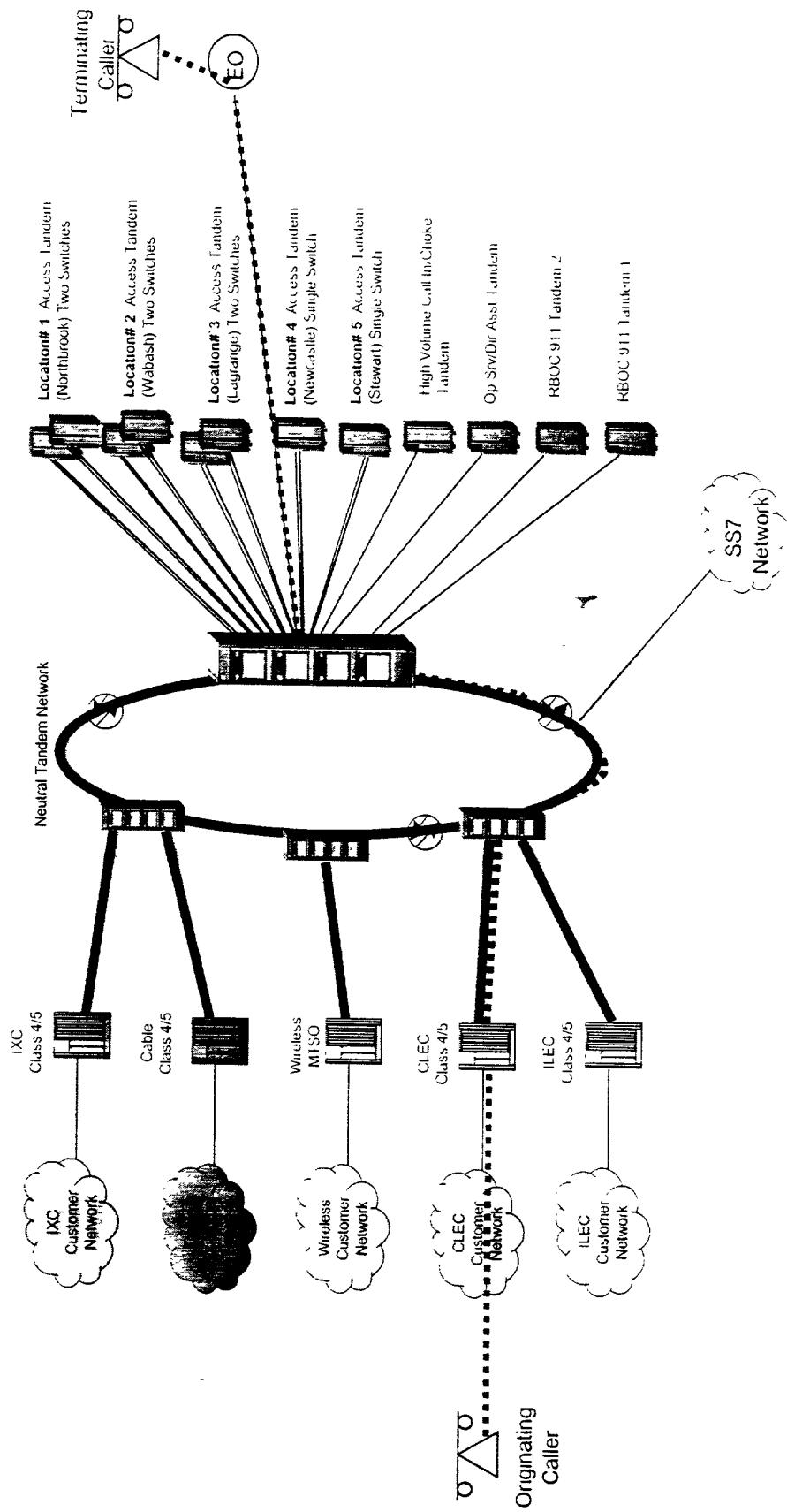


FIGURE 20

Ameritech LATA 357 Tandem Trunking Requirements

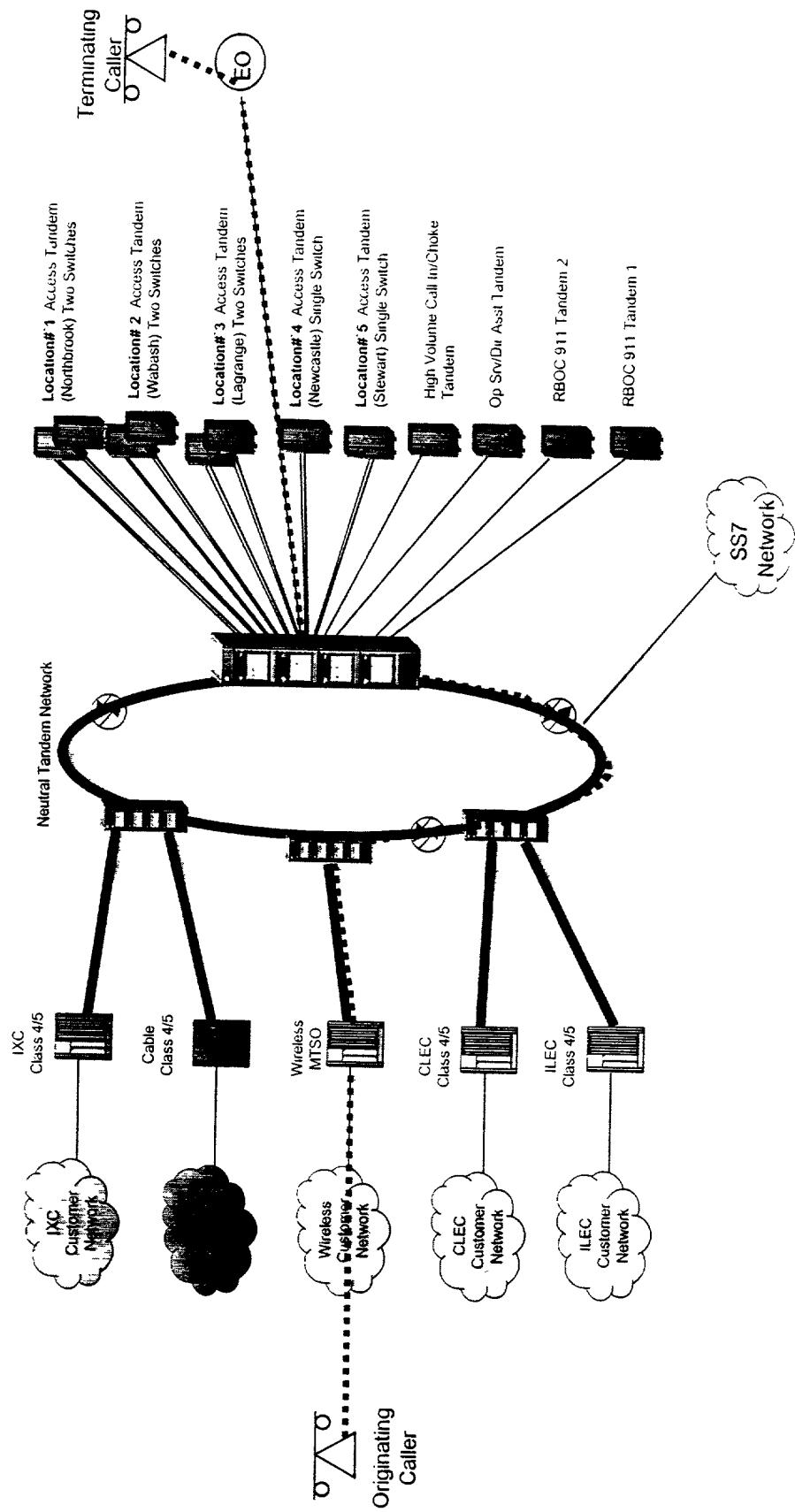


Figure 21

Ameritech LATA 357 Tandem Trunking Requirements

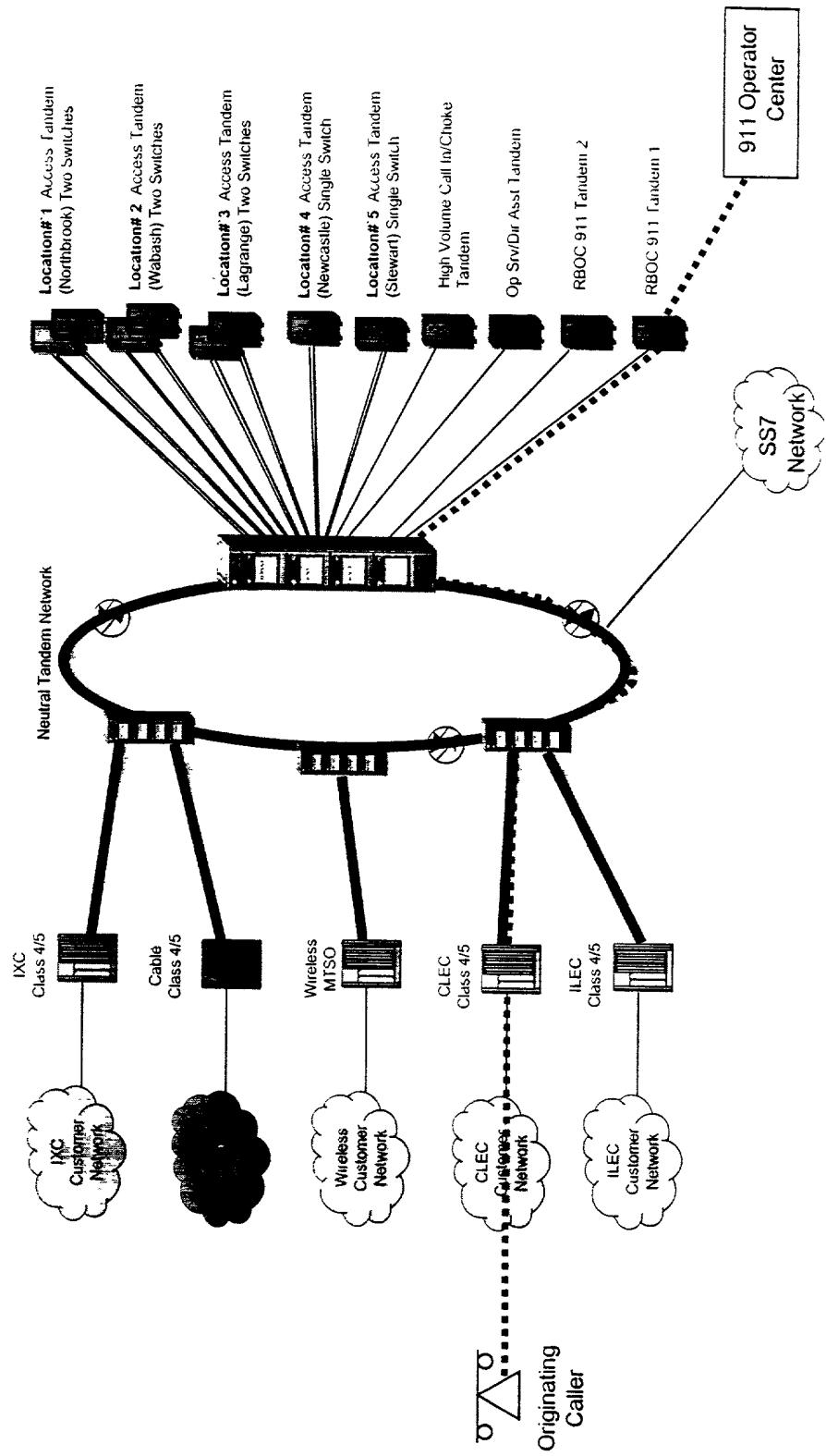


FIGURE 22

Ameritech LATA 357 Tandem Trunking Requirements

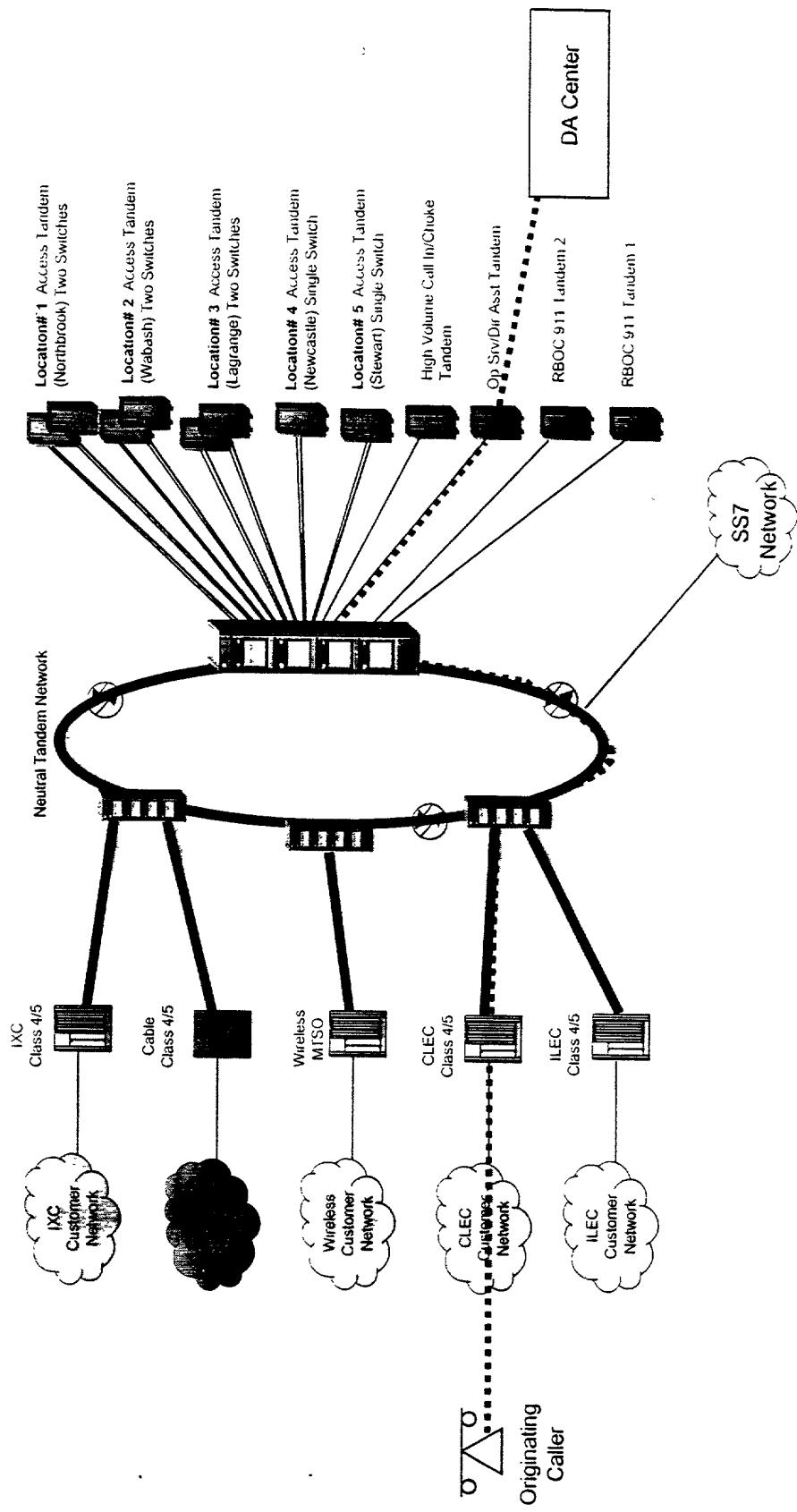


Figure 23